OHIO CULTIVATOR.

A Semi-Monthly Journal of Agriculture and Horticulture.

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OHIO CULTIVATOR.

A Semi-Monthly journal, devoted to the improvement of Agriculture, Horticulture, and the Mecanic Arts—and the promotion of domestic industry.

M. B. BATEHAM,
EDITOR AND PROPRIETOR.

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☞The following notices of the Cultivator are inserted for the *particular gratification* of *Doctor "Spice-box,"* of Springfield:

'We cannot commend the OHIO CULTIVATOR too highly to the attention of the farmers of this county. Every number contains information of which we are certain no intelligent farmer would wish to be deprived. Its typographical execution is unexceptionable, and the contents both useful and attractive.'—*Steubenville Herald.*

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POSTMASTERS and all persons sending subscriptions for this paper, will please remember that the back numbers of the current volume will in all cases be sent to new subscribers, and that no subscriptions are received for less than a year. Those who have already ordered four copies or more, are allowed any additional number at the club price, but the money must be sent free of postage, if less than $3.

☞A number of persons have enclosed $1,50 to us, by mail, and only paid five cents postage, whereas the rate is always ten cents when fifty cents or more in silver is enclosed. Please remember this; and remember, too, whenever writing us on business that is more for your benefit than ours, it is unjust to tax us with postage. Our postage bill for the quarter ending April 1, was $35 33.

SUBSOIL PLOWS, can be procured of J. Stair & Son, Cleveland; Ely & Campbell, Cincinnati; and of Messrs. Ridgway & Co., Columbus. The price is $8,50 to $9; they are manufactured in each of the above cities.

SOWING LOCUST SEED.—The person who inquires how to prepare the seed of black or yellow Locust to secure its vegetation, is directed to pour BOILING water on to the seeds and let them soak in it for 12 or 24 hours, when, if sufficiently scalded, they will be swollen to about four times their former size, and will then grow as readily as corn. If not swollen, scald and soak again in the same manner.

County Agricultural Societies.

We observe by notices in the papers that the farmers in quite a number of the counties of this State are taking the preparatory steps towards forming county agricultural societies; we have not however learned that many have completed their organization, and we again request those interested to send us papers, [*marked*] or letters with lists of officers, &c., in all cases where societies are established.

Columbiana County.

At a meeting of the farmers and friends of agriculture, convened pursuant to notice, at New Lisbon, April 15, an agricultural society for Columbiana county was duly organized in accordance with the provisions of law, and the regulations of the State Board of Agriculture. The following officers were elected for the ensuing year:

President.—Samuel Myers,
Vice President.—William Kemble,
Secretary.—John M'Clymonds,
Treasurer.—Fisher A. Blocksom,
Managers.—Leonard Hanna, Warner Peters, James I. Caldwell, W. E. Russell, Jacob Shawk.

Remarks on the Strawberry.

WITH IMPORTANT HINTS TO THE CULTIVATORS OF THIS FRUIT.

Within a year or two past, there has been much discussion and experimenting among horticulturists, in regard to the character of the *blossoms* of the strawberry plant as affecting the fruitfulness of certain popular varieties, and consequently affording a guide to cultivators as to the means of securing abundant crops. In view of the great and increasing consumption of this most delicious and wholesome fruit, especially in the large towns and cities of this country, the subject is one of much greater public importance than many would at first suppose. The discoveries which have been made, we believe are calculated to make this fruit vastly more plenty and cheap in all our markets than it has heretofore been, and also to induce farmers, and others who have gardens more generally to cultivate this desirable luxury.

In order to lay before our readers a view of the opinions of several eminent writers on this subject, and show the different grounds of the controversy alluded to, we propose to give an extract from Downing's excellent work on Fruits, and follow it with an abridged copy of Mr. Longworth's essay on the strawberry, just published by the Cincinnati Horticultural Society. As the strawberry is now just in full bloom, we advise cultivators to examine for themselves; and we think if they examine a considerable number of varieties, including Hovey's and Hudson's, they will agree with us in the belief that Mr Longworth is in the main correct, and deserves the thanks of the lovers of strawberries for the pains he has taken to investigate the matter, and make known the facts to the public.

Extract from Downing's chapter on the Strawberry.

Fertile and Barren Plants.—A great deal has been written and said lately respecting male and female strawberry plants, and the absolute necessity of planting a due proportion of both, in order to have a crop of fruit.—There is some *practical* value in this notion, but, like most hobbies, it has galloped considerably beyond the boundaries of sober truth.

The strawberry in its natural state, is an hermaphrodite plant, bearing perfect flowers, with the male organs (*stamens, a*), and female organs (*pistils, b*), both in the same blossom. The European Wood and Alpine Strawberries always retain their natural character of the blossom gives a perfect fruit.

1. Natural State. 2. Sterile staminate blossom. 3. Sterile pistillate blossom.

On the other hand, the large growing strawberries including our wild Scarlets, the Pines, and many other varieties raised from these have a strong tendency, when cultivated in rich soil to vary from the natural state; and then many of the plants become partially sterile or barren, because the flowers are in an *imperfect* state—that is, they are deficient either in stamens, or pistils, and consequently the fruit either does not set at all, or is small, and only grows to half its proper size. If they are deficient in *pistils* [fig. 2.], they are called male plants; if deficient in *stamens* [fig. 3.], female plants—but the terms are incorrect; for the organs are always present: though, in these cases, they are imperfectly developed.

It is easy to see, as this imperfect state grows out of he over-luxuriance brought about by cultivation, hat the sterile plants will, when they appear in a bed, always have a tendency, by the greater rapidity of their growth, to crowd the others out; and as they also produce more runners, they always, unless pains be taken to prevent it, are the first that offer a supply for new plantations. Hence we see so many barren strawberry beds.

Now as this barrenness arises from the deficiency of stamens, or male organs, in the blossoms, it is well known that this bed, which would otherwise bear but poorly, or not at all, is made to produce a fine crop, if there is a bed along-side of it, or near by, of plants—[even of other sorts]—which have an abundance of male organs or stamens. And out of this fact grows the practice recommended by Mr. Longworth, and which is so successfully followed at Cincinnati, of always making a plantation with a certain proportion of what he terms *male* plants—the only use of which is to supply statems or pollens to the other imperfect plants, having the pistils in excess.

Mr. Longworth's Essay, (abridged)

I regret that the Committee on the character of the Strawberry plant have not yet been able to make up a unanimous report. It arises from a failure of the crop with some members of the committee, and from a conviction with our European gardeners, that all varieties were perfect in both organs in Europe; and they are slow to believe the contrary. This I am positive is not the fact in England. In some soils and some climates, and in favorable seasons, such staminate plants as are partially perfect in the female organs, yield a larger crop than usual; but can never be made to bear a full crop. But in raising from seed, fully one half will in general be staminate plants, and not one in fifty of them bear even a single fruit. Those that do bear, produce many defective berries. I do not believe that any soil, climate or season can make the pistillate plant bear singly; and it is the only one worthy of cultivation for a crop. Of this, and of the staminate and pistillate character of the plant in England, we have positive evidence from their great horticulturist, Keen himself. In the year 1809, (if my memory serves me as to date) Keen discovered that a new seedling of his planted by itself, did not swell the fruit. On a careful examination of the blossom, it struck him that it might be owing to a defect in the male organs. He then placed some staminate blossoms in a phial of water, and suspended them in the bed. He found the fruit in the vicinity to swell immediately, and he placed more phials of staminate blossoms in different parts of the bed, and had a fine crop. His letter will be found in the Transactions of the London Horticultural Society for that year. What was true in 1809, will be found still to be true.

But it will be asked, if true, why is not this known to

botanists, and to all our nurserymen who raise the plant for sale. The reasons are obvious. The strawberry belongs to a class of plants that have both the male and female organs in the same blossom. In all the white varieties I have seen, and in the Alpines, both organs are always perfect in the same blossom. Both organs existing in all other varieties, though not both perfect in all the blossoms, the attention of botanists is not directed to it, or where noticed, is supposed to be an accidental defect. In all the other species and varieties I have seen, both wild and cultivated, I have met with one only where the defect in the one organ or the other, was not apparent, and in that the fruit was very small. I have never seen a pistillate plant, (one in which the female organs predominate,) that would by itself produce any perfect fruit. Staminate plants (those in which the male organs predominate)where partially productive,generally produce the sweetest and most highly flavored fruit. In certain soils and certain seasons, Keen's seedlings, Wilmot's, the Iowa, and some other staminate varieties, will produce half a crop.

Where our Horticulturists raise from seed, all the staminate plants that are entirely barren, are of course thrown away, and the few staminates that produce a partial crop of large fruit, retained. A pistillate plant, that, mixed with others, bears a full crop of large berries, is transplanted as a treasure, into a bed by itself, for increase. The gardener is the next season surprised to find it wholly barren, and after one or two trials, throws it away.

* * * Mr. Hovey, in the August No. of his Magazine the past year, states, a person had cultivated an acre of his seedlings, where they were mixed with staminate plants, and raised two thousand quarts, and that his new seedlings is valuable for impregnating his old one.—Here is a tacit admission, that his old seedling is defective in the male organs. The yield was not a large one. Mr Jackson raised at the rate of five thousand quarts to the acre, near Cincinnati, as he informed the public in a late publication. Mr Downing, I am positive, had not Hovey's seedling unmixed with others.

To keep varieties separate, is next to an impossibility, and the more so, as new ones are often produced in the bed from chance seed. I was absent from home two months this summer, and left it in charge with my gardener to watch the beds, and keep down runners. On my return, I found the pistillate beds had become mixed, and the staminate Iowa had run on the adjoining pistillate beds on each side, a distance of nine feet. But though Mr. Hovey appears to admit that his old seedlings requires staminate plants near, on the same page, he remarks, 'it is time and labor thrown away to cultivate sterile plants, as has been recommended by some individuals, when varieties *unusually productive*, and of *large size*, can be planted out for that purpose.' He here of course refers to his own seedlings. To put this question at rest, I make the following proposition: He shall send a plant of each of his seedlings to Mr. Wilder of Boston, and Mr. Jackson of this city; and if, after a fair trial, they report them 'unusually productive,' I will present the Massachusetts Horticultural Society with $500. I will do this, if they report them as producing as large a crop as the old seedling will do, where one-tenth of the ground is lost, by barren plants being inserted. I will go further. If they report his old seedling as producing half a crop of perfect fruit, I will do the same thing. If they report the contrary, he must present the like sum to the Cincinnati Horticultural Society.

* * * * * * *

Mr. Downing describes the Old Hudson, as 'a fruit with a neck.' Our Hudson is the reverse of a necked fruit, and I have never seen a single berry of this kind with a neck; and I am positive that ours is the same variety that has been cultivated under this name in New Jersey, and in the vicinity of Philadelphia, more extensively for market, for the last fifty years, than all others united. The Hudson, or Hudson Bay, is described in English works as a necked fruit. They obtained it from New York many years since, and do not consider it a first rate fruit. I incline to the opinion, that the true Hudson was not sent them, or has been lost, and a new variety substituted. It has been of late years imported from England, by New York gardeners, and by them considered the true Hudson. The genuine Hudson is not to be found in Boston, and probably not in New York. It is wholly defective in the male organs, and has been thrown by as unproductive. It is a large, and finely flavored fruit, and where properly impregnated, a great bearer.

Mr. Downing, in a letter to me suggests that our Hudson has probably lost its neck by impregnation with other varieties. I hold, that the character of new seedlings is changed, where the mother plant was impregated by a different variety, but that the shape or color of the fruit is not, where impregnated by a variety differing in shape and color from the plant impregnated. I wish to see the experiment made, whether the size of the fruit of the pistillate plant, is increased or lessoned by the staminate plant used for impregnation. An experienced market gardener assures me that it is increased.

I have this moment received a letter from Col. Carr, an old and experienced Horticulturist of Philadelphia.—He writes me—'I have conversed with Mr. Hobson and others, who pay great attention to the cultivation of the strawberry, and they all unite with me in opinion.' 'The Hudson is the principal sort cultivated for market, and has been for fifty years. It is what we call female or prolific. It never has a neck. A Mr. Arbegust, who was my near neighbor, and excelled in strawberries, removed to Cincinnati about thirty years since, and took the true Hudson with him, and the same now cultivated here. All our principle market gardeners now begin perfectly to understand the difference between staminate and pistillate plants, and find the former such strong runners, as generally to prefer keeping them in separate beds.' Mr. Arbegust for many years sold nine-tenths of the strawberries brought to our market, and raised the Hudson only. Whilst I could, from one-fourth of an acre, scarcely raise a bushel, he would raise 40 bushels. His fruit was much larger, than any other brought to market, and commanded from 25 to 37½ cents per quart. He made a handsome competence from the sale of this fruit. His secret he kept to himself, and had been as much noted for the size of his fruit, and the quantity raised on a given space of ground, in Philadelphia, as he was here. A chance observation of a son of his one day, in my garden, saying 'I must raise but little fruit, as all my plants were males,' first led my attention to the subject. I soon discovered that there were what he called male and female plants, and communicated the fact to our market gardeners.—The result was, strawberries rapidly increased in our market, till as fine as had been raised by Mr. Arbegust, were sold at from 3 to 10 cents per quart, and he ceased to cultivate them.

In a late number of the Farmer and Mechanic, it is said, 'foreign strawberries are unproductive about Boston, and the only ones now cultivated, are the Wood, Early Scarlet, and Hovey's Seedlings. That *three* cultivators near Boston, sent *four thousand, five hundred* quarts to market in a *single season*.' What will our market gardeners say to this! The Wood Strawberry is thought by them to be worthless, and not a quart was ever sold in our market. Its only merit is, that its blossom is said to be perfect in both male and female organs. The Early Scarlet is raised to some extent; but four-fifths of all the strawberries sold in our Market, are the Necked Pine and Hudson; mostly the latter. Mr. Culbertson brings more strawberries to our market than any other person. The greatest quantity he has brought in any *single day*, was FOUR THOUSAND quarts; and not one of the kinds named in the Farmer and Mechanic, among them. All were the Hudson. By properly understanding the true character of the plant, Mr. Culbertson has been able to gather nearly as many quarts in a single day, as three Boston cultivators were able to do in a whole season!

Can Hovey's seedling, or any other large fruited pistillate strawberry, be impregnated by the Alpine Monthly? It is my impression that they are distinct species, and that it cannot be done. If it can, a cross might be produced, that with the size and flavor of the one, might be united the ever bearing character of the other. There is a wild, ever-bearing variety in our State, that would cross with the Scarlet and Pine, and is the only kind I have ever seen, worthy of the name of Everbearing. For the Alpine, after the first crop, rarely produces much fruit through the season. Thirty years since, I met with a solitary strawberry plant on Mount Adams, then in bloom. I removed it to my garden, and the plant not only bloomed freely till frost, but all the runners threw out blossoms at the same time that they made roots, and bore abundantly till late in the fall. The fruit was small, but of fine flavor. A new hand in the garden, early the next spring, supposed they were weeds, and destroyed them. The old Pioneer, Lewis Davis, informed me, the same variety grew in Greene county, on the cliffs, and had been frequently seen by him. I trust it may again be discovered, and Ohio have the credit of producing the only everbearing strawberry, as well as raspberry. The latter plant, to produce a good crop during the summer and fall requires a moist soil. My ground in the city is too rich and dry for it. I have never seen the plant bear as well as in Newark, New Jersey, on a side hill, where the ground is moist, poor and stony. The plant did not attain half the size it does here, but the fruit was large and abundant, till frost.

Expected appearance of Locusts – Inquiry.

Mr. BATEHAM:—It is now seventeen years since the locusts were up in this section of country. They are now found in great numbers near the surface of the earth, and I think they will certainly be up this spring. I have just set out some apple trees, of the best kinds of fruit, and would be sorry to have them destroyed. I am informed, that there are four good nurseries in this county; and, judging from the number of trees sold by my neighbor, Mr. R. Seevers, at his nursery, there must have been at least fifteen or twenty thousand apple trees transplanted into orchards, in this and the edges of the adjoining counties, this spring; among which, I fear, the locusts will make sad work, unless some means can be found to prevent it. How shall we save them? Mr. S. proposes several remedies, but of the result he is not *certain*. Please let us hear from you, upon this subject, Mr. B., through the Cultivator of May 1st, as the locusts will be up before the 15th. I am told that geese and ducks are very fond of them. Would they be of any service among the trees? Or, could not the trees be washed with some kind of preparation that would not injure them, and yet keep off the locusts?

Yours, &c.,

A. SUBSCRIBER.

Pike t'p, Coshocton co., April 24, 1846.

P. S. We have great prospect for fruit in this section of country. We thought our peaches were all killed in the winter, but they are now in full bloom, and we shall have plenty if they are not killed hereafter. S.

Remarks:—We do not think 'A Subscriber' need feel much apprehension that the locusts will do much injury to young apple trees, even if they should make their appearance in great numbers. These insects usually seek the forests or the tops of large apple trees, in which to deposit their eggs, and where they do mischief by cutting off the young branches. We are not aware that the question as to whether these locusts take *food*, in their perfect state, has been fully settled by naturalists. Will our friend J. Sullivant, favor our young readers with an article on the natural history of this very curious insect!

We do not suppose any measures can be readily adopted to prevent the ravages of the locusts on trees. The larger kinds of poultry would doubtless devour great numbers of them, as they rise from the earth, in situations where poultry can be kept. But the operation of this means must, of course, be of limited extent; and from the ease and rapidity of their flight, this mode of protection would have no perceptible effect. Nor can any wash or composition be readily applied, so as to answer the purpose, unless it should be found that they attack *small* trees, which we do not imagine they will do, where large ones of any kind can be found.—ED.

Culture of Carrots for Stock.

The following extract from a communication in the last number of the 'N. Y. Farmer and Mechanic,' may afford timely hints to some of our readers:

The past season, I obtained 236 bushels from 35 rods of ground, being at the rate of 1100 bushels to the acre, the best half yielding at the rate of over 1200 bushels.

I prepared my ground, which had yielded beets and rutabagas the previous season, by plowing in, 12 inches deep, 20 loads per acre of half-rotted barnyard manure, as early as the ground was in working condition. When it had dried a little, it was harrowed, then lightly cross-ploughed, so as not to disturb the manure; then thrown into ridges, running north and south, 3 feet from centre to centre, by turning two furrows together; the lumps of manure and earth were then raked into the hollows by raking lengthwise, leaving the ridges about 18 inches wide on the top, and very mellow. I then made two drills, about 12 inches apart, on the top of each ridge, with an instrument like a rake, with two large teeth. The seeds were then dropped by hand, and covered with a rake head.

The seeds raised by myself from selected roots, were of the violet and yellow mixed, and the white. The white did not yield as well as the others, seeming to be more affected by the drought. My seed (3 lbs to the acre—2 lbs are sufficient) was prepared by steeping twelve hours in water poured on boiling hot; two ounces of guano being added as soon as cold; then rolled in plaster and ashes, and as the weather was unfavorable for sowing, they were kept four days in the cellar. Thus prepared, they came up before the weeds, healthy and green. Two careful hoeings, weedings, and thinnings, with a partial one, were all that were needed. They were allowed to stand about 4 inches apart in the rows. The soil was loamy, with a tenacious subsoil.

The plan of sowing on ridges, might not answer as well in a very dry, sandy soil; but the manner in which they endured the extreme

drought, which came on while they were very small, would indicate that a dry situation is the best for them.

They will continue to grow till the ground freezes, and early sowing is necessary to obtain very large roots. I measured one that was 14 inches in circumference, which came up where my seed was raised the previous year. The roots are not quite as solid when they grow so large, but they do not become corky like turnips. They will bear as much frost as the turnip, and it is probable that the yellow varieties might safely be left in the ground all winter, as I have often found them sound in the spring, when overlooked in the fall. The white ones grow out of the ground 2 or 3 inches.

When pulled, (which may be done most easily, by loosening the earth near them with a spade or fork,) all the tops must be removed, and the roots stored in a cool cellar. I imagine that most of the complaints, of roots heating in cellars, arise from the tops being imperfectly removed; for I have been in the habit, annually, of storing several hundred bushels of roots in the house cellar, without any bad odor arising from any of them. By thorough ventilation in the clear days of November, I reduce the temperature of the cellar as far as can be done safely without freezing potatoes, then close up for the winter, and very little alteration takes place in apples or roots until spring. Now, early in March, we have white turnips, winter squashes, and pumpkins, nearly as good as in the fall.

Carrots as Food for Horses. — The following is copied from the records of the meetings of the New York Farmers' Club:

'Wm. M'Kinster, of Middletown, Conn. A written communication from him on the subject of soiling cattle, was read. He asserts that carrots are fully equivalent, bushel for bushel, to oats, for feeding horses in the winter; that there is no difference in the working ability of a horse fed on carrots or oats.

'*The Chairman.* A bushel of carrots well cut up is as good as a bushel of oats for a working horse. I have tried the experiment fully and satisfactorily; I have fed twelve quarts of sliced carrots daily, instead of twelve quarts of oats, to a horse, the whole winter, and found no difference in results. I gave hay with the carrots, as we do with the oats. The carrots cost about ten cents a bushel, and the oats nearly thirty cents a bushel.'

Ruta Bagas--Soaking Seed Corn.

Mr. Bateham:—As I have never given any information required by your correspondents, I will say a few words in answer to the inquiries about ruta bagas, and soaking seed corn:

I bought some ruta baga seed of you last spring, and sowed some in drills, the rest broad-cast, from the 10th to the 15th of June, in new, light soil; they came up well, but got very weedy before they were hoed. The plants were thinned in July and August; they produced a good crop, and I consider the roots worth twice as much as common turnips, both for the table and for stock. I am using them now for the table, and they are as hard and nearly as juicy as they were last fall, while common turnips are soft and spongey, and worthless, unless cooked and *fixed up* for hogs. I think ruta bagas should be sowed in drills—say the 15th of June—and when the plants are about a month old, they may be transplanted where desired. They grow easier than cabbage.

[We do not approve of transplanting, except for the purpose of filling up defective rows. But the seed should always be sown in drills, unless the soil is perfectly free from weeds.—Ed.]

SOAKING SEED CORN.

Last spring, I soaked most of my seed corn in *salt petre*, or in *whiskey*. It kept off the birds and squirrels—though nothing that I have discovered will save late planted corn from the blackbirds, after they have hatched their young ones.

If the ground is very dry, soaked corn may not always do well. And I do not believe that salt petre promotes the growth of corn any more than simple water. After soaking, I rolled some of my seed corn in common gypsum; but did not perceive that it had any effect on its growth, though it helped to keep off the grubs and birds.

Truly yours,

T. Worthington.

Hocking Falls, O., April, 1846.

Coal Tar not good for Fruit Trees.

Dear Cultivator:—On page 560, of the first edition of 'Downing's Fruits and Fruit Trees,' you will see a prescription to 'prevent mice and rabbits from girdling trees,' which consists of the application of Coal Tar, laid on with a painter's brush, from the ground to the height of two feet—the dose to be given 'before winter commences.'

A neighbor of mine, who is a great book farmer, had a large orchard of young apple trees planted out one year, and a number of fine budded peach trees, some of which had been badly used the winter before, by the rabbits; and to all of which, (on Mr. Downing's authority,) he, last fall, applied the fatal plaster—for they are now all dead!—burnt up, as if *aqua fortis* had been rubbed round their trunks! This is bad enough; but my neighbor, who, in his unbounded admiration of Downing, had purchased, in Cincinnati, a barrel of the *black drop*, insisted upon my using it on some beautiful and choice peach trees, which, the spring before, I had bought of that excellent nursery-man, S. S. Jackson; and they, too, are all dead! Hurrah for Downing, and book farming! I must confess, I had my own fears, the infernal stuff looked so dark and pitchy; and I told my friend and neighbor, that I had not seen it recommended in the Cultivator, (my polar-star in such matters.) But the Cultivator was voted inferior in authority to A. J. Downing, (I hope this is not my old friend Jack,) and so I had to 'go it blind.' Perhaps, therefore, you may do some of your numerous subscribers a service, by making an extract of this famous recipe, from the *book*, and telling them to beware of it.

Yours, &c.,

J. C. S.

Near Cleves, Ohio, April 1846.

Preparation of Seed Corn.

Results of Experiments.

Mr. Bateham:—In answer to 'A. P. A.' and others, I send you the following experiments in preparing corn for seed, made by myself last year:

I finished planting my corn the last week in April, with the exception of an acre of ground, which was not prepared in time. Before this last was in readiness, that first planted *came up*, and no mistake; for the birds helped it along, root and branch! I came to the conclusion that it was necessary to protect my late planting, or the prospect of raising a crop would not be the most flattering; and having heard that preparing the the seed in *tar* would prevent birds from pulling it, I concluded to try the experiment. My plan was this:

I first heated a kettle of water to nearly boiling point, poured it into a bucket, added tar to the rate of a pint to a bushel of corn; put my corn in, and stirred until the tar adhered to the corn. I then drained off the water, and mixed in a sufficient quantity of dry leached ashes to separate the corn. This being done, it was ready for planting. After planting most of the piece, I found I had not a sufficient quantity of seed prepared to plant the whole; consequently, a few rods on one end, I planted without any tar being mixed with the corn. The consequence was, not a dozen hills of this part were permitted to remain, while, with the exception of now and then one adjoining the part planted without tar, not a hill of the rest was disturbed.

What the birds left of the first piece I planted, was killed by the frost; so that it was necessary to replant it again. This seed I prepared in the same manner as the other, with the exception of a piece through the middle of the field, where I used lime instead of leached ashes. The ground was very dry, but the corn that was mixed with ashes came up in seven or eight days; where I used lime, it remained in the ground until we had a rain, which was nearly three weeks after planting. The birds had no inclination to disturb it; but what effect the tar had on its growth after coming up, or protecting it from the worm, I am unable to say; but would recommend it as the best kind of a *scare-crow* for birds.

C. E. Burr.

Franklin co., April, 1846.

Tarring Seed Corn---Growing Corn on poor land with little labor.

Mr. Bateham: Since writing the communication which appeared in the last number of the Cultivator, a friend has lent me the reports and statistical tables of Mr. Ellsworth, which I had frequently heard of, and sought for without finding; and from a brief examination, I find the same practice and opinions mentioned under the head of what is called 'Manuring the Seed,' and some of his receipts are nearly the same as I have recommended for preparing seed corn. * * * Of the utility of *tarring* seed corn, as a preventive of loss from birds, I am well convinced, but the difficulty of doing it properly, I believe, prevents the practice from being general. Coming, as I did, from a place where birds were much more destructive to the up-coming corn than they are about here, and hearing that rolling in tar was a preventive, I concluded to try it, and made some two or three efforts to tar the corn equally, and at the same time not too much, as a thick coat is apt to cause it to take the dry rot; hence the directions I gave in the last Cultivator were a necessary preparation to tarring the corn; and when the seed is prepared as there directed, to tar the corn equally, take about a quart of tar for a bushel of prepared seed, put the tar in a bucket and pour two gallons of boiling water thereon; stir the tar and hot water briskly, until the water has the tar in solution, then pour it on the corn, and with a common hay rake, rake it backwards and forwards, in every direction, with much dispatch, not stopping to sweep up the corn that you may scatter over the floor, but let that duty be attended to by another. In this way, every grain will have its due proportion of tar, and get it before the tar has time to chill. The water, or a portion of it will run off. Then roll the corn in plaster, or lime and ashes. It is then ready to plant, and if it has been properly prepared, and the weather suitable, it will be up and growing in four or five days — and the sooner it is up, the better start it will get of weeds; and the faster it grows at the start, the better the chance for a good crop.

In the article in the last Cultivator, I had reference to raising corn on *rich* land: now let me give you the substance of the information I received from an old, sagacious, and experienced friend, in Maryland, some twenty-five years ago, how to raise the most corn with the *least* labor upon *poor* land, and which I have tried with satisfactory success. We will suppose a poor field in pasture; list with three furrows, throwing the first furrow back with the second, and a third to it: this plows all the ground in and under the list — lists six to six and a half feet apart, and as you list, plant on the top of the list, two and half to three feet apart, leaving two or three stalks to grow in each hill; thus, when you are done listing, you may be done planting. Leave what is called the 'middles,' to about the 10th or 15th of June; then with a good plow and team, plow them out, following the plow only to thin the corn, and then leave it until you gather it. Thus, by only once plowing, and following the plow to plant and to thin, you have a crop of corn.

I will state as concisely as possible, the philosophy of this plan, in addition to the economy of labor; and first, the corn being on a ridge, it will not likely be injured with early cold rains, and it will get the most benefit of the sun at a season when that is necessary. 2d. The grubs and cut worms, on old poor pasture fields, are generally very injurious. They are too clumsy to crawl up the list ridges, and you have left the middles in grass for them to feed on until the corn gets out of danger. 3d. The grass being turned under late, it forms a stratum of vegetable food for

the growing corn, and its decomposition, assists in keeping the ground light and suitable for corn roots to grow in. 4th. It is the opinion of all that I have conversed with about it, that as the ground was plowed but once, and presuming that to be well done, about one half in June, just as grass was beginning to shoot for seeding, that not only less grass and weeds will grow on ground thus treated, than on ground plowed and worked in the usual way, but scarcely any at all, and none to injure the crop will grow that season, or until late in the fall.

JOHN B. BAYLESS.

JEFFERSON Co., O., April 24, 1846.

The Curculio, or Plum Insect.

In our last year's volume, page 65, we gave an account of the history and transformations of the *Curculio* — the insect that makes such havock and destruction of our plum crop. The season is now at hand, when these marauders will again make their appearance, and wishing to stimulate as many of our readers as possible, to make warfare upon them, or to try experiments for curtailing their operations, we again honor them with a place in our columns, by inserting the following extract from Thomas' *Fruit Culturist:*

The *Curculio*, represented in the annexed figure, is a small insect, not more than a quarter of an inch long, of a dark brown color, the sheaths covering the wings slightly variegated with lighter colors, the body resembling in size and appearance a ripe hemp seed.

About the time the young fruit attains the size of a pea, the curculio begins its work of destruction. It makes a small crescent shaped incision in the young fruit, and lays its egg in the opening. The presence of the egg may be easily detected by these incisions upon the surface. The annexed figure represents a young plum with two of these incisions. The egg soon hatches into a small white larva, which enters the body of the fruit and feeds upon it, causing, usually, its premature fall to the ground.

The insect, soon after the fall of the fruit, makes its way into the earth, where it remains till the following spring, probably in the pupa or torpid state, and is then transformed into the perfect insect, to lay its eggs and perpetuate its race. It has the power of using its wings in flying; but whether it crawls up the tree or ascends by flight, appears not to be certainly ascertained.

Several expedients have been proposed for its destruction, or expulsion.

Among the first may be mentioned various modes for frightening it from the tree. The frequent passing near trees planted by door-paths, usually accomplishes this end, and hence, trees in the most frequented places often bear abundantly, while the crops on those more remote are destroyed.

In one case, a string from a pump-hadle, fastened to a tree, by the repeated shaking thus given, preserved the fruit. But the best remedy, among the first class of expedients, and, indeed, one of the most thoroughly efiectual ever yet devised, is to jar the insects from the tree, upon white sheets spread beneath, and destroy them, at once, by a pinch of the thumb and finger.—While lying upon the sheet, they may not be distinguished by the unpractised eye, from the withered blossoms; but a moment of attention obviates this difficulty. A quick and sudden jar is important, and may be given by the stroke of a mallet, upon the short stump of one of the smaller limbs, sawed off for this purpose, and which prevents bruising the bark.

The best time for this work is in the cool of the morning, when the insects are stupid from cold, and will drop quickly. It should be commenced very early in the season, as soon as the fruit begins to *set*. A few minutes are sufficient for many trees, if two boys can be had to carry the sheets, which should be kept stretched by cross sticks across the ends. One day's work for the season, may thus save entire crops.

The second class of remedies includes those for destroying the fallen fruit, as soon as it drops, and before the larvæ escape to the earth.

One of these consists in beating the ground smooth beneath the tree, sweeping up the fallen fruit daily, and feeding it to hogs. Paving with brick answers the same end. Confining a sufficient number of geese or swine among the trees, to pick up the fallen fruit, accomplishes easily and effectually the same purpose. It does not, of course, save the present crop; but where tried for many successive seasons, it has uniformly afforded abundant crops. The planting of plums, nectarines, apricots, and the earliest peaches, separately from the rest of the trees, for the confinement of swine, should not be forgotten.

The application of salt under the trees, is said to prevent the ravages of the curculio. To determine its efficacy, and the quantity the trees will bear, further experiments are desireable.—From one to two pailfuls of brine for one tree have been tried, and, though killing grass and weeds, have not injured the tree.

OHIO CULTIVATOR.

COLUMBUS, OHIO, MAY 1, 1846.

The Season--Prospects of Fruit, &c.

The weather, since our last, has been, most of the time, highly favorable for vegetation---remarkably warm, with several fine showers. Indeed, we have never seen leaves and blossoms put forth more rapidly than during the past ten days. The show of fruit blossoms in this region is, upon the whole, very good; notwithstanding more than one half of the peach buds were destroyed by the winter, there are enough left to answer all purposes, while apples and other hardy fruit are completely loaded, so that, if no severe frosts blight our prospects, we may anticipate the largest crops of fruit this year, that have ever been produced in Ohio.

The wheat crop, in this region, looks remarkably fine; and we learn that the same is true of nearly all parts of the state. There is some danger of its coming forward too rapidly, thereby increasing the liability to injury from late frosts, should any occur. Some farmers have adopted the precaution of feeding it off with sheep, and we think they have done wisely.

Notices of Samples of Wool, are again crowded out—Publications, ditto.

A number of Inquiries shall have attention in our next---the weather has been so fine of late, that we could not stay in doors; our "little farm" has occupied the greater share of our attention. It will soon be all planted.

☞ Our thanks are due to Hon. C. Delano, for public documents.

Remarks on 'staggers' in sheep in our next; diseases of horses before long.

THORN HEDGES.—We have no faith at all in the use of the English Hawthorn for hedges in this climate. We would recommend the American species of thorn, [*Cratægus,*] or, what we believe is better than any other plant for the purpose in this climate, the *Maclura* or Osage orange. Will our friend MR. NEFF favor our readers with some of the results of his experience and observation on this subject, when it may suit his convenience?

A Correction.—In the article on Lucerne, in our paper of April 1, page 55, instead of saying 'it does not answer as well for *fattening*' the last word should have been *pasturing*.

Misrepresentation Exposed. — The anonymous scribler for the Springfield Republic, to whose benefit we devoted a paragraph a month since, has shown himself deserving only our contempt, by wilfully misrepresenting our language, and attempting thereby to injure us in the estimation of those who are readers of that paper and not of ours.

In speaking of our remarks on the superior advantages and qualifications of the editor of the Western Farmer and Gardner, he accuses us of making "a pitiful allusion to a gentleman whose misfortune it is, in the eyes of the Cultivator, to be 'college learned,' and more than all, that the title of Rev. should be prefixed to his name."

Now, our readers will bear us witness, that we have not given utterence in our columns to any such language or sentiments whatever. On the contrary, we expressly stated, what we sincerely believe, that these very circumstances, with others that we named, give him decided advantages over us, as a writer and editor.

If any more libellous abuse is to come to us from that quarter, we would suggest to the editor of the Republic, that it would better comport with the respectable character of his paper, if he were to give his readers our own language, or, at least, avoid publishing gross perversions thereof.

We can assure Mr. Beecher and his friends, that we entertain no other feelings towards him than those of respect and esteem; and if our remarks have occasioned him the least unpleasant feelings, we sincerely regret it, and promise to be more considerate in future.— *Ed.*

Law of Ohio.

AN ACT for the more effectual protection of enclosures.

SEC. 1. *Be it enacted by the General Assembly of the State of Ohio*, That if any person or persons shall wantonly, or maliciously, throw, put or lay down, or prostrate any fence enclosing any orchard, pasture, meadow, garden or other field, or enclosures, in which any grain or other vegetable is cultivated, the property of, or lawfully occupied by, any other person or persons, or shall wantonly, or maliciously open, let down, throw down, or prostrate any gate or bars, belonging to any such enclosure or field, and leave any such fence, bars or gate down, prostrate or open, every such person, or persons shall, upon conviction thereof, be fined in any sum not exceeding one hundred dollars, or be imprisoned in the county jail not exceeding thirty days, or both, at the discretion of the court.

SEC. 2. In case of prosecution for any of the above offences, if the land therein referred to, shall be owned or occupied in common by two or more tenants, the indictment shall be deemed sufficient if any one or more of such tenants in common shall be named therein.

SEC. 3. That all prosecutions under this act, shall be prosecuted in the manner provided by law, for crimes of the second class, and shall be commenced within one year from the time any such offence shall have been committed, and all fines collected under the provisions of this act, shall be paid into the treasury of the county where the offence shall have been committed, for the use of the common schools of such county.

SEC. 4. That this act shall take effect and be in force from and after the fourth day of July next.

ELIAS F. DRAKE,
Speaker of the House of Representatives.
SEABURY FORD,
Speaker of the Senate.

FEBRUARY 28, 1846.

Procuring Sheep from the East.

FRIEND BATEHAM: I have hitherto failed to comply with thy invitations to furnish further information respecting my eastern sheep, for the following reason: When I came to examine a number of the flocks and draughts from others of them, which their owners have so highly puffed in the Agricultural papers, and saw the extent to which the public had been imposed upon, I had well nigh concluded to remain entirely silent. Upon more mature consideration however, as the readers of the Cultivator were informed last fall that I was at the East in search of choice sheep, I deem it no more than justice to them and myself that they have, as briefly as practicable, the result of the adventure. For the information of any who may think of engaging in a similar project, I may state, that they were driven to the Hudson river, taken thence by steamboat to Albany, by canal boat to Buffalo, and steamboat to Cleveland. Cost of transportation, about $3,25 per head. I reached home with thirty three, and sold most of the rams I bought for sale, within three weeks after my arrival, at an average price of $20, which, counting all expenses, was but a trifle more than they cost me. Most of these were a cross between Saxon and Merino. I have remaining 10 pure blooded Saxon ewes, some of which have beautiful lambs by their sides, and others yet in an interesting condition, 7 rams, 3 pure blooded Saxons, and one grade which I bought for my own use, and three grades which are for sale.

It is a matter of surprise that men will suffer prejudices to possess their minds, without looking at the cause and

probability of things. However, as seeing is believing, I propose to furnish any respectable wool grower of your region, with a pure blooded Saxon buck lambs worth $25, which he shall put with his own flock of lambs, many or few, and if it does not keep in quite as good condition as the average, he shall have it gratis; if it does, it will be optional with him whether he purchase.

Respectfully, WM. H. LADD.

Richmond, Jefferson co., O., 4th mo., 1846.

P. S. Should any one accept the above proposal, I should like to be informed immediately, that I may not engage all my buck lambs. W. H. L.

LADIES' DEPARTMENT.

The following spirited lines were published in an eastern periodical a year or two ago, but they are just as good as new, and we are sure some of our readers will agree with us that they contain true philosophy as well as poetry. At this delightful season, when all nature invites to activity in the open air, and the fields and woods are redolent with fragrance and beauty, most young ladies who possess the requisite skill, especially those residing in towns and cities, we doubt not will feel strongly inclined to imitate the example of our friend, the fair poetess, and practice the health imparting lesson which her lines convey, as often as a suitable opportunity presents; and as our gallant readers of the other sex are sure to glance their eye over this column the first thing, we trust they will not be slow to *take a hint.*—ED.

The Horseback Ride.

BY MISS SARA J. CLARKE.

When troubled in spirit, when weary of life,
When I faint with its burdens and shrink from its strife;
When its fruits turned to ashes, are mocking my taste,
And its fairest scene seems but a desolate waste:
Then come ye not near me, my sad heart to cheer
With the low words of friendship, or sympathy's tear!
No counsel I ask, and no pity I need,—
But bring me, oh bring me, *a gallant young steed,*
With his high arched neck, and his nostril wide,
His eye full of fire, and his step full of pride!
As I spring to his back, as I seize the strong rein,
The strength of my spirit returneth again;
The bonds are all broken that fettered my mind,
And my cares borne away on the wings of the wind!
My pride lifts its head, for a season bowed down,
And the queen in my nature now puts on her crown!

Now we're off, like the winds, to the plains whence they came,
And the rapture of motion is thrilling my frame!
What a wild thought of triumph that this feeble hand
Such a steed, in the might of his strength, may command!
What a glorious creature!—ah, glance at him now,
As I check him awhile on this green hillock's brow;
How he tosses his mane, with a shrill, joyous neigh,
And paws the firm earth in his proud, stately play!
Hurra, off again! dashing on as in ire,
'Till the long flinty pathway is flashing with fire!
Ho, a ditch! shall we pause? no, the bold leap we dare,
Like a swift-winged arrow we rush through the air!
Oh not all the pleasures that poets may praise,
Not the wildering waltz in the ball room's blaze—
Nor the chivalrous joust, nor daring race—
Nor the swift regatta, nor merry chase—
Nor the sail, high heaving waters o'er—
Nor the rural dance, on the moonlit shore
Can the wild and thrilling joy exceed
Of a fearless leap on a fiery steed!

All nature looks joyful—the sun laughs down
On the wood-lands gay, and meadows brown,
And the joy-lighted smile of my earliest days,
In my eye it beams, on my lip it plays!
How my heart throbs hope! how it dances in mirth!
Lives a happier soul on the green, glad earth?

New Brighton, Penn.

☞ Here is a scrap of poetry, written by a youth of only seventeen years of age, JAMES PUMMILL, of Cincinnati, now at Circleville, from whence it was forwarded to us by a friend. We shall not be surprised, if in a few year's time, the Queen City may be proud to claim the writer as her son.

Spring.

Welcome, sweet Goddess of a genial clime,
To western lands! *Nature*, at thy approach,
Leaps into blooming beauty; and the touch
Of thy ethereal wand awakes the streams—
The distant brow of every mountain gleams
In the clear light of youthful spring sublime!

Lo! where the FARMER, monarch of the soil,
Lord of the wheaten sheaf, renews his toil,
All-bounteous Heaven unfolds her generous rains,
And lends kind nourishment to fields and plains.
What sound is that? It falls upon mine ear
Like the faint music of another sphere:
Awake! my soul, and drink th' enchanting strains.

O! sylvan heralds of the dawning spring!
O! woodland vocalists, forever sing!
Yours are the strains that sooth the drooping heart,—
Yours are the strains that cause the soul to fling
Away the bonds of sorrow, and take wing
To realms of purer bliss! Stay!—why depart,
Inspiring harmonists, this earthly shore?
Stay yet awhile, and cheer this weary breast,
For, ah! perchance, ere Spring hath gone to rest,
These feet may press the bosom of the earth no more! J. P.

CIRCLEVILLE, O., April, 1846.

Directions for Cooking Vegetables.

MR. EDITOR: It looks like presumption in one no more gifted than myself, to say any thing about cooking, after the fine receipts given by the talented Miss Leslie; but I have heard it remarked by females, that they could not fully understand the directions given in books, and my motive for writing, is to make it so plain that the youngest house-keeper may perfectly comprehend the matter. You will excuse my rude style of writing, as I have many things to attend to, and but little time to spare; so you must just take it as it comes.

The only vegetables in market now, are spinage and asparagus: we will begin with spinage—it is a good dish, when prepared right.

SPINAGE should be nicely picked, and put into a stew-pan, with just sufficient water to keep it from scorching. When it has boiled for twenty minutes, pour it into a cullender and strain the water off; put it into the stew-pan again, with a piece of butter the size of a walnut, and a little pepper and salt; mince it up, and return it to a slow fire; take some slices of light bread, toast them well on both sides, dip them in the water in which the spinage was boiled, lay the spinage on the toast, and garnish with hard boiled eggs, and you will have one of the best spring dishes.

ASPARAGUS should be tender; if not, the slower it is boiled the better. It should be put into boiling water, with a little salt, and boiled for half an hour. It is better to boil it in a cotton bag,—and, by the way, all housekeepers should have small cotton bags for boiling vegetables in, as they are not only better, but save time in dishing. When done, have some toast ready, which dip in the water in which the asparagus was boiled. Then lay the asparagus on it, pour melted butter over it, and send to the table.

*** Now, Mr. Bateham, you can do just as you like with my simple communication; and if you think it worth while, I will continue on until pickling time, and will be as brief as possible, so as not to take up much room in your valuable paper.

I remain respectfully yours,

A VIRGINIAN.

OHIO, April 24, 1846.

Remarks.—We are sure that very many of our female readers, especially 'young house-keepers,' will agree with us in the hope, that our Virginian friend will GO ON, and carry out the plan she has proposed. We would suggest, that it would be well for her to anticipate a little the appearance of the different vegetables and fruits in the market, so that the instructions may reach our readers in time for them to derive the fullest benefits therefrom. The article of rhubarb, or pie-plant, for instance, ought to have been included in this number. We would further suggest, as the object of the writer is to make things *plain*, it may save us and the printers from murdering her communications, if she will take a little more pains in punctuating, and be careful to begin sentences with capital letters. We will preserve the directions for making harvest soup, till near the time when it is to be used.—ED

Preserving Cheese in a Hay Mow.

MR BATEHAM.--Being desirous of contributing my mite to the Ladies' Department of your paper, I offer the following with the hope that it may be of value to some of your readers who are engaged in the dairy business:

About a year ago, a neighbor informed us that we could preserve our cheeses, during the fall and winter, with comparatively no labor, by putting them in a hay-mow---a strange place to keep cheese, we thought; but but we have tried it, and the result has exceeded our utmost expectations. Each cheese was first enclosed in a sack, which was made to fit closely. The sack should be of pretty strong cloth, as the weight of the hay is apt to break it if it is too old. They were then laid in the hay-mow, and the hay pitched on as usual. As the hay was fed out during the winter, they were found as sound as when first put in. We put one in within an hour after it was taken from the press; and when we came to it, we found it entirely free from mould, and good in every respect. The great advantage of this method, seems to be in a saving of labor, as all they require, after being taken from the press, is, to be sacked, oiled, and put in the hay, where they are safe from all kinds of animals, whether flies, mice, or human beings. Let every housewife, who makes cheese, try it, and if the result is any other than favorable, I hope they will inform us of the fact; or, if any one knows of a better way, or who can instruct us in *any* matter pertaining to the farmer's kitchen, I would say to her, 'take the best and surest method of laying before the public, the facts in your possession, by sending a communication to the Editor of the Cultivator.' Do not excuse yourself on the ground that you are not qualified for performing that duty. Had I waited until I felt competent, I fear I should never have written this communication.

Respectfully, &c.

INEZ.

Franklin co., April, 1846.

On the Mechanic Powers.

From Lardner's Popular Lectures on Science and Art: copied by the permission of the publishers.

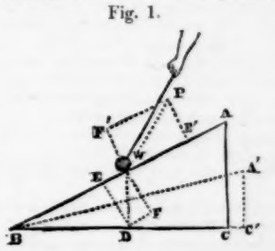
Continued from page 54.

THE INCLINED PLANE, WEDGE AND SCREW.

The inclined plane is the most simple of all machines. It has a hard plane surface forming some angle with a horizontal plane, that angle not being a right angle.—When a weight is placed on such a plane, a twofold effect is produced. A part of the effect of the weight is resisted by the plane, and produces a pressure upon it; and the remainder urges the weight down the plane, and would produce a pressure against any surface resisting its motion placed in a direction perpendicular to the plane.

Let A B, fig. 1, be such a plane, B C its horizontal base, A C its height, and A B C its angle of elevation.—Let W be a weight placed upon it. This weight acts in the vertical direction, W D, and is equivalent to two

Fig. 1.



forces—W F perpendicular to the plane, and W E directed down the plane. If a plane be placed at right angles to the inclined plane below W, it will resist the descent of the weight, and sustain a pressure expressed by W E. Thus, of the weight W resting in the corner, instead of producing one pressure in the direction W D, will produce two pressures: one expressed by W F upon the inclined plane, and the other expressed by W E upon the resisting plane. These pressures respectively have the same proportion to the entire weight as W F and W E have to W D, or as D E and W E have to W D, because D E is equal to W F. Now the triangle W E D is in all respects similar to the triangle A B C, the one differing from the other only in the scale on which it is constructed. Therefore the three lines A C, C B, and B A, are in the same proportion to each other as the lines W E, E D, and W D. Hence A B has to A C the same proportion as the whole weight has to the pressure directed towards B, and A B has to B C the same proportion as the whole weight has to the pressure on the inclined plane.

We have here supposed the weight to be sustained upon the inclined plane, by a hard plane fixed at right angles to it. But the power necessary to sustain the weight will be the same, in whatever way it is applied, provided it act in the direction of the plane. Thus a cord may be attached to the weight, and stretched towards A, or the hands of men may be applied to the weight below it, so as to resist its descent toward B. But in whatever way it be applied, the amount of the power will be determined in the same manner. Suppose the weight to consist of as many pounds as there are inches in A B, then the power requisite to sustain it upon the plane will consist of as many pounds as there are inches in A C, and the pressure on the plane will amount to as many pounds as there are inches in B C.

From what has been stated, it may easily be inferred that the less the elevation of the plane is, the less will be the power requisite to sustain a given weight upon it, and the greater will be the pressure upon it. Suppose the inclined plane A B to turn upon a hinge at B, and to be depressed so that its angle of elevation shall be diminished, it is evident that as this angle decreases, the height of the plane decreases, and its base increases. Thus, when it takes the position B A', the height A' C' is less than the former height A C, while the base B C' is greater than the former base B C. The power requisite to support the weight upon the plane in the position B A' is represented by A' C', and is as much less than the power requisite to sustain it upon the plane A B, as the height A' C' is less than the height A C. On the other hand, the pressure upon the plane in the position B A' is as much greater than the pressure upon the plane B A, as the base B C' is greater than the base B C.

The power of the inclined plane, considered as a machine, is therefore estimated by the proportion which the length bears to the height. This power is always increased by diminishing the elevation of the plane.

Roads which are not level may be regarded as inclined planes, and loads draw upon them in carriages, considered in reference to the powers which impel them, are subject to all the conditions which have been established for inclined planes. The inclination of the road is estimated by the height corresponding to some proposed length.—Thus it is said to rise one foot in fifteen, one foot in twenty, &c., meaning that if fifteen or twenty feet of the road be taken as the length of an inclined plane, such as A B, the corresponding height will be one foot. Or the same may be expressed thus: that if fifteen or twenty feet be measured upon the road, the difference of the levels of the two extremities of the distance measured is one foot. According to this method of estimating the inclination of roads, the power requisite to sustain a load upon them (setting aside the effect of friction) is always proportional to that elevation. Thus, if a road rises one foot in twenty, a power of one ton will be sufficient to sustain twenty tons, and so on.

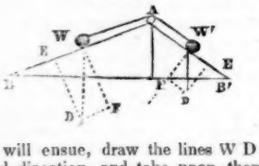
On a horizontal plane, the only resistance which the power has to overcome, is the friction of the load with the plane, and the consideration of this being for the present omitted, a weight once put in motion would continue moving forever, without any further action of the power. But if the plane be inclined, the power will be expended in raising the weight through the perpendicular height of the plane. Thus in a road which rises one foot in ten, the power is expended in raising the weight through one perpendicular foot for every ten feet of the road over which it is moved. As the expenditure of power depends upon the rate at which the weight is raised perpendicularly, it is evident that the greater the inclination of the road is, the slower the motion must be with the same force. If the energy of the power be such as to raise the weight at the rate of one foot per minute, the weight may be moved in each minute through that length of the road which corresponds to a rise of one foot. Thus if two roads rise, one at the rate of a foot in fifteen feet, and the other at the rate of one foot in twenty feet, the same expenditure of power will move the weight through fifteen feet of the one, and twenty feet of the other at the same rate.

From such considerations as these, it will readily appear that it may often be more expedient to carry a road through a circuitous route than to continue it in the most direct course; for, though the measured length of road may be considerably greater in the former case, yet more may be gained in speed with the same expenditure of power, than is lost by the increase of distance. By attending to these circumstances, modern road-makers have greatly facilitated and expedited the intercourse between distant places.

If the power act oblique to the plane, it will have a twofold effect: a part being expended in supporting or drawing the weight, and a part in diminishing or increasing the pressure upon the plane. Let W P, fig. 1, be the power. This will be equivalent to two forces, W F', perpendicular to the plane, and W E' in the direction of the plane. In order that the power should sustain the weight, it is necessary that that part W E' of the power which acts in the direction of the plane, should be equal to that part W E, fig. 1, of the weight which acts down the plane. The other part W F, of the power acting perpendicular to the plane, is immediately opposed to that part W F of the weight which produces pressure. The pressure upon the plane will therefore be diminished by the amount of W F.' The amount of the power, which will equilibrate with the weight, may, in this case, be found as follows: Take W E' equal to W E, and draw E' P perpendicular to the plane, and meeting the direction of power. The proportion of the power to the weight will be that of W P to W D. And the proportion of the pressure to the weight will be that of the difference between W F and W F' to W D. If the amount of the power have a less proportion to the weight than W P has to W D, it will not support the body on the plane, but will allow it to descend. And if it had a greater proportion, it will draw the weight up the plane toward A.

It sometimes happens that a weight upon one inclined plane is raised or supported by another weight upon another inclined plane. Thus, if A B and A B' fig 2, be two inclined planes, forming an angle at A, and W W' be two weights placed upon these planes, and connected by a cord passing over a pulley at A, the one weight will either sustain the other, or one will descend, drawing the other up. To determine the circumstances under which

Fig. 2.

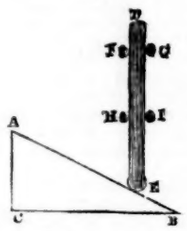


these effects will ensue, draw the lines W D and W' D' n the vertical direction, and take upon them as many nches as there are ounces in the weights respectively.—W D and W' D' being the lengths thus taken, and therefore representing the weights, the lines W E and W' E' will represent the effects of these weights respectively down the planes. If W E and W' E' be equal, the weights will sustain each other without motion. But if W E be greater than W' E', the weight W will descend, drawing the weight W' up. And if W' E' be greater than W E, the weight W' will descend, drawing the weight W up. In every case, the lines W F and W' F' will represent the pressures upon the planes respectively.

It is not necessary for the effect just described, that the inclined planes should, as represented in the figure, form an angle with each other. They may be parallel, or in any other position, the rope being carried over a sufficient number of wheels placed so as to give it the necessary deflection. This method of moving loads is frequently applied in great public works where railroads are used.—Loaded wagons descend one inclined plane, while other wagons, either empty or so loaded as to permit the descent of those with which they are connected, are drawn up the other.

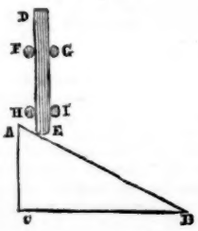
In the application of the inclined plane, which we have hitherto noticed, the machine itself is supposed to be fixed in its position, while the weight or load is moved upon it. But it frequently happens that resistances are to be overcome which do not admit to be thus moved. In such cases, instead of moving the load upon the plane, the plane is to be moved under or against the load. Let D E, fig. 3, be a heavy beam secured in a vertical position between

Fig. 3.



guides, F G and H I, so that it is free to move upward or downward, but not laterally. Let A B C be an inclined plane, the extremity of which is placed beneath the end of the beam. A force applied to the back of this plane A C, in the direction C B, will urge the plane under the beam, so as to raise the beam to the position represented in fig. 4. Thus, while the inclined plane is moved through the distance C B, the beam is raised through the height C A.

Fig. 4.



When the inclined plane is applied in this manner, it is called a *wedge*. And if the power applied to the back were a continued pressure, its proportion to the weight would be that of A C to C B. It follows, therefore, that the more acute the angle B is, the more powerful will be the wedge.

In some cases the wedge is formed of two inclined planes, placed base to base as represented in fig. 5. The theoretical estimation of the power of this machine is not

Fig. 5.

applicable in practice with any degree of accuracy.—This is in part owing to the enormous proportion which the friction in most cases bears to the theoretical value of the power, but still more to the nature of the power generally used. The force of a blow is of a nature so wholly different from continued forces, such as the pressure of weights, or the resistance offered by the cohesion of bodies, that they admit of no numerical comparison.—Hence we cannot properly state the proportion which the force of a blow bears to the amount of a weight or resistance. The wedge is almost invariably urged by percussion, while the resistances which it has to overcome are as constantly forces of the other kind. Although, however, no exact numerical comparison can be made, yet it may be stated in a general way that the wedge is more and more powerful as its angle is more acute.

In the arts and manufactures, wedges are used where enormous force is to be exerted through a very small space. Thus it is resorted to for splitting masses of timber or stone. Ships are raised in docks by wedges driven under their keels. The wedge is the principal agent in the oil-mill. The seeds from which the oil is to be extracted are introduced into hair bags, and placed between planes of hard wood. Wedges inserted between the bags are driven by allowing heavy beams to fall on them. The pressure thus excited is so intense, that the seeds in the bags are formed into a mass nearly as solid as wood.

Instances have occurred in which the wedge has been used to restore a tottering edifice to its perpendicular position. All cutting and piercing instruments, such as knives, razors, scissors, chisels, &c., nails, pins, needles, awls &c., are wedges. The angle of the wedge, in these cases, is more or less acute, according to the purpose to which it is to be applied. In determining this, two things are to be considered—the mechanical power, which is increased by diminishing the angle of the wedge, and the strength of the tool, which is always diminished by the same cause. There is, therefore, a practical limit to the increase of the power, and that degree of sharpness only is to be given to the tool which is consistent with the strength requisite for the purpose to which it is to be applied. In tools intended for cutting wood, the angle is generally about 30 deg. For iron, it is from 50 to 60 deg.; and for brass, from 80 to 90 deg. Tools which act by pressure may be made more acute those which are driven by a blow; and, in general, the softer and more yielding the substance to be divided is, and the less the power required to act upon it, the more acute the wedge may be constructed.

In many cases, the utility of the wedge depends on that which is entirely omitted in its theory, viz., the friction which arises between its surface and the substance which it divides. This is the case when pins, bolts, or nails, are used for binding the parts of structures together; in which case were it not for the friction, they would recoil from their places, and fail to produce the desired effect. Even when the wedge is used as a mechanical engine, the presence of friction is absolutely indispensible to its practical utility. The power, as has already been stated, generally acts by successive blows, and is therefore subject to constant intermission, and, but for the friction, the wedge would recoil between the intervals of the blows with as much force as it had been driven forward. Thus the object of the labor would be continually frustrated. The friction, in in this case, is of the same use as a ratchet-wheel, but is much more necessary, as the power applied to the wedge is more liable to intermission than in the cases where ratchet-wheels are generally used.

(To be Concluded.)

My Experiment with Bees.

Mr. Bateham:—I wish for the *encouragement* of others, to give you the result of my bee experiment.

Two years ago this last Jackson winter, I bought a hive of bees, five dollars the price.—Well, I placed them in my garret, gave them two pounds of honey, raised up the hive three times per week, drew out the semi-circular tubes, killed the worms, and brushed all clean; this, with their industry, and my own good luck, (which generally attends my attempts to procure the comforts and *sweets* of life,) enabled them to live through the succeeding winter. In the spring I brought them from their Senatorial, to the lower House; this Irish hoist seemed to agree with them very well. Some time in July, I placed a box on top of the hive, (a hole had previously been made,) but like the Dutchman's hen they choose to have their own way and refused to deposit their 'butter and honey' in the new department; so with the advice of some of the knowing *apiarians*, I determined to force them into a new hive. This, after a stubborn resistance, was effected, and the beauty and booty was ours, consisting of some 30 lbs. of poor honey, some worms, a great many young bees and much bee bread.

After considerable consultation, and once swarming, they went bravely to work, and had the season been six months longer, I verily believe they would have made honey enough to have kept them over the winter; but alas, the poor little fellows are *dead!* I had put them in a cool dry place in the cellar, and put in two or three pounds of honey, but from stubbornness or some other cause, they did not meddle with it, and on examining them the first of March, they were

all done with the troubles and cares of this world. So if any of my good friends wish to make a speculation, let them buy a swarm of Bees. Try it brethren, nothing like trying!

Respectfully yours, &c.,

H. Safford.

Putnam, O., 1846.

On Preserving Sweet Potatoes.

Mr. Editor: — We have made a little experiment, which, although of not much importance, is, nevertheless gratifying to us. We had tried for several years, without success, the usual modes of saving the seed of this potatoe through the winter. It occurred to us, last fall a year ago, that we would adopt a mode of our own. We accordingly took a nail keg and filled it with alternate layers of wheat chaff and potatoes; then took a barrel and filled it with wheat bran, placing the keg above, in the centre, headed it up and set it in the printing office, as far as possible from the stove. Last spring the potatoes came out as fair and as fine as they went in.

But, as the winter was a very mild one, we feared to publish this experiment, supposing it might not answer of a cold winter, and that we should thus be found barking before we got out of the woods. So we held on till we had time to repeat the experiment, which we did the past winter (cold enough too) in the same manner, as above, and our potatoes came out, yesterday, first rate. Some, however, perished by their side, which were packed in oat chaff, and surround in the barrel by wheat chaff instead of bran.

The wheat chaff appears to be the natural element for the potatoes to lay in, and the bran to keep them warm, and protect them from the air. They could be kept, in the same way, in any room accommodated with fire regularly, and perhaps in dry warm rooms where there was no fire.

We give the above experiment, and leave it to the enterprize of those concerned to vary it, to suit the quantity which it may be desirable to keep. We have little doubt the chaff and bran would preserve the sweet potatoe under various circumstances; probably in a dry cellar.

Respectfully yours, &c.

C. Springer.

Meadow Farm, O., March, 1846.

Culture of Flax.

Mr. Tucker: In a crop of flax every part is valuable, and well directed labor will reap its reward. On the 25th of May, 1845, I sowed three pecks of seed upon an acre of land, which, the year previous, was green sward, and produced oats, wheat, and potatoes. The soil was gravelly loam. It was plowed in the fall, and dragged several times in the spring, previous to sowing, to destroy the weeds. No manure was applied to it.

From the above ground I obtained fifteen bushels of clean seed, which sold for eight shillings per bushel, and 250 lbs. dressed flax, sold for $7 50 per hundred lbs. Footed up, it will read as follows:

15 bushels seed, - -	$15 00
250 lbs. dressed flax, - -	18 75
	33 75
Paid for dressing, - - -	$6 25
Do for extra labor, - -	2 00
	8 25

Then I have left for my own labor and the use of my land, $25 50. Upon what ordinary land, without manure or extra tillage, what grain crop would have yielded me more nett profit, with less expenditure of capital! Some get more bushels of seed, and many less. The greater the quantity of seed, as a general rule, the less will be that of flax.

The facilities for harvesting and dressing flax, are much greater than in former times. It was once thought to require too much labor to make it profitable; but the existence of labor-saving machinery has induced many to go into it, because it is profitable, and the dread of work is counterbalanced by the large profits it yields.

Will flax grow and seed well year after year on the same land? Does it exhaust the soil more than other crops? What manure is best calculated to impart to the soil that principle which the flax has extracted? If some of your correspondents will answer the above questions, they will do the public a favor, and greatly oblige a farmer. B.

Leyden, N. Y., Feb., 1845.

Albany Cultivator.

Another, from the same paper. — The culture of *flax* is becoming a very important branch of agricultural pursuit. But a few years since, if a farmer sowed more than a bushel of flax seed, unless he was a very extensive farmer, he was considered by his neighbors as bordering on insanity. The great majority of farmers in those days, sowed but a few quarts of seed, with the view more particularly of raising flax rather than seed. It is now no uncommon thing for farmers to sow twenty, thirty, and sometimes fifty bushels and upwards; and notwithstanding the flax is usually destroyed, the seed alone, as a general thing, pays as well, and frequently better, than any other crop. The flax is considered of no value, from the fact that the expense of pulling, rotting, dressing, and preparing for market, overbalances its worth; and hence farmers have resorted to the most expeditious modes of getting rid of it, such as burning it, throwing it into wet marshy places &c. I have recently had conversations with several farmers, who have for the last two years engaged quite largely in raising it, who assure me, that if the flax is cut before it becomes 'deep ripe,' by paying the same attention to it in curing it that is usually bestowed upon the securing of hay, cattle will not only eat it *readily*, but are very fond of it; besides, it keeps them in a very thriving, healthy condition. Those persons with whom I conversed, agreed in their belief, that the flax thus secured, is worth almost, if not quite, as much as the seed.

I wish to mention another important fact in relation to raising flax seed, which every farmer should know. Several farmers of my acquaintance, the past season, sowed flax seed and barley on the same ground, and in every instance, the yield of either kind was as great as if sowed separately; besides flax and barley straw combined, make very excellent fodder. By having proper screens, there is no difficulty in separating the flax seed from the barley. If, by sowing flax seed and barley together, twice the amount can be obtained from the same ground, is it not worth at least the consideration of every farmer? N.

We have received several communications in reference to the practice of growing flax and barley together, but know nothing of its advantages from personal experience. We were not aware that the seed of flax would be matured while the stalk was in so green a state as to be good for fodder; but it will be seen that the above and several other articles, speak of it as being valuable for this purpose, when mixed with barley straw, and that at the same time, a crop of seed is obtained in connection with the barley.— *Ed. Alb. Cul.*

How to sustain and Improve the quality of the Soil.

It has become an important inquiry among many of our farmers, how they shall fertilize such of their lands as are yielding large burthens of produce, which are taken off the premises for sale! Where remote from a large city, or places for supplying manures, this is a most important query, and one which they are highly interested in having answered correctly. It is absolutely certain, that farmers cannot annually rob their farms of large crops of grain, grass and roots, without either supplying manure to the soil, or losing rapidly in its fertility. We shall briefly indicate some of the most obvious resources for sustaining and improving the productiveness of the soil.

In the first place, not an ounce of animal manure should be suffered to be wasted, either liquid or solid. When not dropped on the feeding grounds, but around the stables and yards, it should be carefully saved and treasured up, where it cannot waste till used. This should be carefully and judiciously compounded with turf, or peat, or vegetable matter, so as to retain all its gasses, and not be permitted to drain away, and as soon as a proper time offers, it should be carried on to the fields and at once incorporated with the soil. Another resource for many of our Eastern farmers, is the immense stores of peat and muck that are within their reach, and which tends greatly to benefiting a light, sandy or loamy soil. All the animal matter, ashes leached or unleached, should be carefully collected and applied to their land, and any other fertilizing substance which is to be found around the premises or can be collected at not too great an expense in the neighborhood.

But in many cases where the stock of cattle is not large, and the produce sold from the land is considerable, some more definite and certain means for sustaining a farm must be resorted to. With the most intelligent and systematic agriculturist, a proper rotation is adopted, which has been found by experience, to be adapted to the locality and products. By this is meant, a regular succession of crops on the same field through a series of years, which at their expiration, are again repeated. They are so arranged that two grain crops never follow each other, but are separated by root crops, grass, &c. This system prevents the necessity of the soil yielding similar ingredients through two or more sucessive seasons, which it will seldom do to an extent sufficient to produce a good second crop. Time is required for it to decompose such of the ingredients which it contains, as are necessary to form what are called the inorganic portions of the plant, in such conditions to be taken up and appropriated by the plant. It also enables the cultivator to apply his green or putrescent manures to such crops as are most properly adapted to receive them. Such are corn and roots, and nearly all the objects of cultivation excepting the smaller grains.

The great object of rotation, however, is to give the land rest as it is termed, when allowed to remain in grass or meadow; or refreshment when clover or other fertilizing crops are plowed into the soil for manure. Such crops carry back to the soil so much of its materials as they have taken from it, and in addition, important elements which they have abstracted from the atmosphere; and they are found by long practice, to be of great benefit in sustaining the fertility of the soil. Before passing on to a consideration connected with this particular point in the subject, of the highest importance, we would say, that a large share of the benefit to the land, derivable from this practice, may be secured, by feeding the clover to such animals as will consume it on the ground.— We say a part only, for all the food which goes to supply the respiration of the animal, which is no inconsiderable share, passes off again into the air, and is lost. Another part is stowed up in the augmented size of the animal, for it is certain that whatever weight it acquires while feeding, is at the expense of the soil. If milch cows are pastured, the abstraction of valuable ingredients is still greater, as it has been found that pasture fed off for a long time by cows, have been robbed of large amounts of phosphate of lime, and other important matter. If horses are thus fed and taken on to the roads or else where to work, it is evident that large quantities of this manure will thus be lost to the fields supplying the food.

Sheep are undoubtedly the best adapted to the object we have in view. They remain stationary in the same fields where they feed, and return to them all they have taken, save what escapes by respiration, evaporation, or is stored up by the wool or carcass. They also drop their manure on the highest and driest parts of the ground, where it is more beneficial than elsewhere; and we would most earnestly recommend the introduction of sheep husbandry on a more or less extended scale, to any farmer who practises the system of turning in crops for manure. The necessity of carrying them through the winter, will still further provide the materials for fertilization, by accumulating a store of manure from this source, which without the sheep or a full equivalent in other stock, would not be thus secured.

But to recur to the subject of turning in green crops. It is evident at a single glance, that this system does not accomplish all that is necessary

in sustaining the full measure of fertility of land subject to close cropping. In a rotatation consisting of clover and wheat simply, we find that the wheat abstracts large amounts of phosphate of lime, potash, gypsum, salt, &c., &c., which if nothing be added to the soil, except the clover crop will in a few years reduce any ordinary soil to so low a point, that it cannot yield profitable returns. The land may continue to yield for a long time; but it is evident that it is losing properties at every successive harvest, which must be supplied to it, or it will eventually be exhausted.

The true and only remedy for this, is, to ascertain by analysis, either of your own, or the well established researches of others, precisely what of the inorganic materials, such as are inherent in the soil, and not found to any appreciable extent in the atmosphere, are taken from the land by cropping or feeding, and not returned to it by straw, manure, or offal of any kind, and return those materials to the land in such available shape as will enable future crops to supply themselves with all they require. This is indispensable to a succession of good crops and prolongs fertility, and no farmer is wise who neglects this practice for a single year, however seemingly well his adopted system may answer, which does not embrace the foregoing practice.—*American Agriturist.*

Books for a Farmer's Library.

We have been requested to furnish a list of such works on Agriculture and kindred subjects, as we would recommend to be procured for a library for a Farmers' Club, or an individual farmer who is disposed and has the ability to supply himself and family with a good assortment of works of this kind. In complying with this request, we shall confine our selection to such works as can be found at the principal book-stores in this country, and the number will be so restricted as not to incur too great an expense. We will also mention the cost of each, and point out such as can, in our opinion, best be omitted, where a more limited selection is desired.

Agricultural Periodicals are unquestionably the cheapest and best foundation for a farmer's library, embracing, as they do, the whole round of practical and scientific knowledge on almost all subjects relating to the farm, the garden, and the household. We would, therefore, commence by subscribing for two or three or more of the following works, (supposing, of course, that the *O. Cult.* is on hand:) The Albany Cultivator, ($1 per year) including the two past volumes; The American Agriculturist, ($1 with the three past volumes; The Genesee Farmer, (50cts current volume; Skinner's Farmers' Library, ($5) current volume — this embraces republications of several foreign works of great value, and should by no means be omitted, The American Quarterly Journal of Ag. and Science, ($3) with past year's volume — a work of high order. To these should be added any journal that is particularly adapted to the region or style of farming, as the Prairie Farmer, for the West, the Southern Planter, for the South, &c. See list in our paper of April 1.

On Agricultural Chemistry, &c. — Johnston's Lectures is the best work—2 vols., $1 50 or 1 75. As introductory to this, and especially for young persons, and those not familiar with chemical science, the Catechism of Ag. Chemistry, (25cts) and a little work called Elements of Ag. Chemistry and Geology, by the same author, (50cts) are very useful. These embrace all the valuable discoveries of Liebig, and other chemists, and are much more easily comprehended by farmers -- though persons who wish to become thoroughly scientific farmers, should of course add to these, Liebig's Chemistry of Agriculture, and his Animal Chemistry — the cost, in good style, is $1 or $1 25 each. Next, we would add a recent work, called Rural Economy, by Dumas and Boussingault — $1 50. Then there are several excellent little works on the subject of manures and tillage, such as Dana's Muck Manual, Smith's Productive Farming, the Farmers' Mine, &c., costing only 25 or 37 cents each, and well worth a place in the library.

On general subjects, the Farmers' Encyclopedia, by C. W. Johnson, a very large and comprehensive work, is indispensable to a good library — price $4; and Gardner's new work, the Farmers' Dictionary, ($1 50) must also be included. Then there are a number of smaller works of much practical value, such as Buel's Farmers' Companion, American Farmers' Instructor, (by Wiggins. The Complete Farmer, (by Fessenden,) &c., costing 75 cents to $1 each.

On Cattle, Sheep, &c.—Youatt's Treatise on Cattle, is the most complete---$2, or 2 50; Skinner's edition of Clater & Youatt's Cattle Doctor---50 cts Stewart's Stable Economy 1 25; 'Every Man his own Farrier,' (Clater's,) 50 cts.; 'Morrell's American Shepherd,' 1 00, and last, though not least, 'Bement's Am. Poulterer's Companion, 1 25.

On Horticulture. — We would have 'Bridgeman's Young Gardener's Assistant,' 1 50, or 'McMahon's American Gardener,' 2 25, [and we should like to add 'Downing's Landscape Gardening,' if it were not for the expense,] 'Downing's Fruits and Fruit Trees,' must certainly be included, 2 00; though, if this cannot be obtained, 'Thomas' Fruit Cuiturist'--50 cts--can be made to answer as a substitute. Nurserymen and Florists will need to extend this list.

To the foregoing list, there might, with propriety, be added works on sciences intimately connected with agriculture---as geology, botany, entomology, mechanics, philosophy, &c.---some knowledge of which, should be possessed by every well-informed, scientific farmer.

But we find that our list already embraces about 35 volumes, the cost of which would be about 50 dollars; and fearing that a larger list might alarm those for whom it is designed, we will add no more at present.

English News, Markets, &c.

Dates to April 4. — Peel's new Tariff Bill has met with increased opposition in the Commons, we were in error in stating it had *passed* that body, last month,) and fears begin to be entertained of its failing to become a law the present session. The European Times says: 'The commercial accounts from all parts of the world are desponding and gloomy; the markets for all descriptions of produce, are in a state of stagnation; stocks are daily on the increase, with sinking prices and diminishing consumption; and, in short, a condition of things exists which threatens to suspend all the ordinary functions of commercial and manufacturing industry.

'It is hardly necessary to state, that this depression, which every week renders more galling and ruinous, has its primary origin in the uncertainty which still hangs about the fate of the tariff.

'The gloom which hangs over business, has been gradually deepening during the last six weeks — the last fortnight being the darkest of all. Under the most favorable circumstances, there seems little chance of seeing the new tariff on the statute book before the end of May; and it will be at least the middle of that month before the critical stage — the second reading — can have passed the upper branch of the Legislature.'

Indian Corn and Meal. — This article continues to arrive in great quantities in the principal ports of this country, and is already becoming one of great consumption. In Liverpool, we have several flour dealers and bakers who put forth Indian corn, Indian flour, and bread made of Indian flour, as the prominent article of sale; and among the higher classes of society, it is used with English or American flour in making bread.

Wool. — 'Our wool market has been less animated during the last ten days. What with failures in the woolen districts, the still unsettled state of the corn bill and tariff, with the continued dearness of money, the wonder is, that prices for wools, on the whole, are so well maintained.

'There is some inquiry for the better class of United States fleeces, as for some purposes they have been found to answer well, and we quite expect them to be a favorite article, as they become better known. The United States wool of middle and lower qualities being in limited demand, may be had at lower rates.'

THE MARKETS.

CINCINNATI, *April* 29.—Produce and provision trade more brisk than of late, but prices remain low. Flour, 3 70@3 75 ₩ bbl; wheat 65, corn 31@33, oats 28@30, barley 65@70, rye 45@50, cts pr bu. Pork, sales of clear at 10 50, mess at 9 50, and prime at 7 50 pr bbl. Bacon, sides and shoulders, 5 00 pr 100 lbs, hams 5 75@6 00. Butter is plenty and low in price--good keg sell at 7@7½; fresh roll 8@9; at retail in market, 12½@15 cts pr lb. Cheese is steady demand for shipping, at 6¼@6½ cts pr lb, and for home trade 7@7½. Eggs are very plenty--packers pay 5@5½ pr dozen. Potatoes bring 37 to 50 cts pr bushel. Hay 12@$15 pr ton. Wool is without change.

CLEVELAND, *April* 27.—Flour, no sales of importance; good brands are worth 4 37@4 50. Pork, sales of mess at 9 75 pr bbl. Lard, sales at 5½@5¾ pr lb. Corn, 600 bushels sold at 38 cts. Potatoes bring 38 to 50 cts pr bu. Salt 1 12½ pr bbl.

NEW YORK, *April* 25.---Flour is dull---shippers only offer 5 12½, and good brands for city sell at 5 25. Corn has declined a trifle---5,000 bushels Jersey Yellow, for export, brought 67 cts. Pork is also dull, at 10 75 for mess, and 9 37 for prime. Beef is without change or activity. Ashes bring 3 87 for pots, and 4 18 for pearls, with slight demand.

PHILADELPHIA CATTLE MARKET, *April* 23.---The offering comprised 1260 head of Beef Cattle, including 800 from Ohio, 350 cows and calves, 750 swine, and 1100 sheep and lambs. Prices---beef cattle are dull, and have declined to 4 50@6 25 pr 100 lbs; 300 were driven to New York, and 200 remain unsold. Cows---dry cows sell at 6@12; Springers 10@18, and milch cows at 15@30 each. Swine are in good demand at 5@4 50@5 25 pr 100 lbs. Sheep and lambs---sales of sheep at 1 50@3 50, and lambs at 1 00@1 25 each, according to quality.

COLUMBUS PRODUCE MARKET.

[MARKET, TUESDAYS, THURSDAYS AND SATURDAYS.]

Corrected for the Ohio Cultivator, April 30.

GRAIN.				**POULTRY.**			
Wheat, full wt., bu.,	65	a	70	Turkeys, each,	37	a	50
Indian corn,	22	a	23	Geese, "	18	a	
Oats,	16	a		Ducks, "	8	a	10
PROVISIONS.				Chickens, "	8	a	10
Flour retail, bbl.,	3,75	a		**SUNDRIES.**			
" 100 lbs.	2,00	a		Apples, bu.	1,75	a	2,00
" Buckwheat,	2,00	a	2,50	" dried,	1,50	a	1,75
Indian meal, bu.	25	a	31	Peaches, dried,	2,00	a	
Hominiy, quart,	3	a	4	Potatoes	25	a	31
Beef, hd. qr.				Hay, ton,	5,00	a	6,00
" 100 lbs.,	3,00	a	3,50	Wood, hard, cord	1,25	a	1,50
" fore qr.,	2,00	a	2,50	Salt, bbl.,	2,00	a	
Pork, large hogs,	3,50	a		**SEEDS.**			
" small "	2,50	a		Clover, bu.,	4,25	a	4,50
Hams, country, lb.,	6	a		Timothy,	3,00	a	3,50
" city.cured,	7	a	8	Flax,	75	a	81
Lard, lb., ret.,	6½	a	7	**ASHES,**			
" in kgs. or bls.	6	a		Pot, 100 lbs..	2,75	a	3,00
Butter, best rolls,	10	a	12½	Pearl,	3.50	a	3,75
" common	9	a	10	Scorched salts,	2,50	a	
" in kegs,	7	a	8				
Cheese,	6¼	a					
Eggs, dozen,	5	a	6				
Maple sugar, lb.	5		6				
" molasses, gal,	50						
Honey comb, lb.	10	a	12½				
" strained	12½	a	14				

SUPERIOR GARDEN SEEDS,

For sale at the Office of the Ohio Cultivator.

[*Next building south of the Capitol, up stairs.*]

☞ Most of the kinds will be sold in small papers, at 5 cts. each; but when large quantities are wanted, many of them can be had by weight or measure, at reasonable prices.

Lake Erie Nursery, Cleveland, Ohio,

ELLIOTT & CO., Proprietors.

THE proprietors of this Nursery offer for sale one of the largest stocks of Fruit and Ornamental Trees, Shrubs, Roses, &c., &c., ever offered in Ohio.

Orders through the Post Office or otherwise, will receive prompt attention, and when desired, trees will be packed in such order that they may be conveyed many hundred miles without injury.

Cleveland, May 1, 1846.

SWEET POTATOES.

A FEW thousand sweet potato plants; also a choice selection of Garden Seeds raised the past season, to be had on application to the subscriber, north-east corner of Seventh and Broad Streets.

LEWIS JENKINS.

Columbus, O., May 1, 1846.

HEDGES.

FOR sale by the subscriber, four thousand Osage Orange, suitable for hedges, one year old, from one to two feet high, at $25 per thousand.

S. S. JACKSON.

Near Cincinnati, March 20, 1846. [april 1]

THE CELEBRATED TROTTING HORSE BELLFOUNDER.

WILL stand the present season in the city of Columbus, O., commencing on the first day of April, 1846, and ending the first day of July following, on the following conditions:

Single leap, $5, to be paid when the mare is served. Season, $8, to be paid by the first day of December next; secured by note of hand when the mare is served. Insurance, $12, to be paid as soon as the mare is known to be with foal, secured as above. Refer to handbills for pedigree und performance, and a description of his stock, by letters from Timothy T. Kissam. of N.B., the gentleman who bred him or to Maj. Wm. Barker, of this place

A. W. BROWN.

Columbus, March 7, 1846.

'SAMPSON' AND 'HERCULES.'

THE imported English Draft Horse 'Sampson,' and his three year old colt, 'Hercules,' will stand the ensuing season, at the Red Lion Hotel in Circleville.

TERMS.—For Sampson, $7 a sing'e leap, $12 the season, and $15 to insure; for Hercules, $5, $8 and $10.

Mares from a distance will be taken by the season only, and charged the insuring price, with no extra charge for pasture.

B. F. EATON & BROTHERS.

Columbus and Circleville, March 1, 1846.

SEED STORE.

ELY & CAMPBELL,

23, Lower Market Street, Cincinnati.

WILL pay cash at the best market rates for Clover, Timothy; Orchard grass, Blue grass, Red Top, Flax and Mustard seed &c. Keep constantly on hand, and for sale, all kinds of Garden, Flower and field seeds. Also, Agricultural Impiements, Agricultural and Horticultural books and papers. They also execute all orders for Fruit Trees, Ornamental Shrubs, &c.

Portage Mutual Fire Insurance Company,

Cuyahoga Falls, Ohio.

CAPITAL TO MEET LOSSES $400,000.

SHORT ADVERTISEMENTS, suited to the agricultural character of this paper, will be inserted at the rate of six cents per line, for th rst insertion, and three cents for each subsequent insertion